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SYNOPSIS OF THE NEOTROPICAL COCKROACH
GENUS *MACROPHYLLODROMIA*
(ORTHOPTERA: BLATTOIDEA, EPILAMPRIDAE)

By ISOLDA ROCHA E SILVA ALBUQUERQUE¹

Macrophyllodromia Saussure and Zehnter (1893) is a genus of Neotropical cockroaches which resemble *Blattella germanica* (Linnaeus) in that the pronotum bears two conspicuous dark longitudinal bars, but the species are decidedly larger and more robust than *Blattella*, which is of Old World origin and differs especially in having longitudinal rather than oblique branches of cubitus in the teginen. The genus *Macrophyllodromia* belongs to the group *Blattellites* and shows close relationship to *Latiblattella* Hebard (1917), *Antitheton* Hebard (1919), and *Eurylestes* Hebard (1940). Including two new species here described, five species are known, all confined to tropical America, from the Guianas and Bolivia to Mexico. We have examined specimens of all the species, and here redescribe *M. maximiliani* (Saussure) and record a Bolivian specimen of *nigrigena* Hebard, the latter previously known only from French Guiana. Specimens of *Macrophyllodromia* are scarce in collections, and most of these here reported were intercepted with bananas by plant quarantine inspectors.

¹ This work was done while the author, a member of the staff of the Museu Nacional, Rio de Janeiro, Brazil, was studying in the United States under a grant from the Guggenheim Memorial Foundation.

Macrophyllodromia Saussure and Zehnter

Macrophyllodromia Saussure and Zehnter, 1893, p. 46.—Caudell, 1905, p. 87.—Shelford, 1908, p. 18.—Kirby, 1910, p. 565.—Hebard, 1920, p. 41; 1926, p. 152.

The generic features of importance are: Size large for the group. Interocular space narrower than that between antennal sockets. Head with a broad dark brown band from interocular area to labral suture. Maxillary palpi well developed. Pronotum convex to the lateral portions. Tegmina and wings fully developed, the former with branches of media and cubitus oblique. Wings with anterior rami not clubbed distad. Cubitus vein with few branches that go to the margin. Intercalated triangle small. Abdomen unspecialized. Male supra-anal plate transverse and projecting between cerci, with rounded apex. Subgenital plate asymmetrical. Female supra-anal plate converging into the rounded apex. Subgenital plate simple, free margins broadly convex and rounded. Cephalic femora with ventrocephalic margin armed with heavy spines, which decrease gradually in length mesodistad, and terminate distad by three increasingly longer distal spines. Three pulvilli and arolium moderately developed. Tarsal claws unspecialized.

Type of genus: *Pseudophyllodromia maximiliani* Saussure, 1873.

Key to species

- 1 Subgenital plate of male asymmetrical with intricate structure 2
Subgenital plate of male with a deep cleft medially and forming two asymmetrical lobes (Panama) *M. splendida* Hebard
- 2 Pronotum with two broad longitudinal dark-brown bands having lateral margins translucent ochraceous buff 3
Pronotum with two broad longitudinal brown bands having lateral margins translucent ochraceous buff and dotted with brown (French Guiana, Bolivia).
M. nigrigena Hebard
- 3 Tegmina translucent, veins tinged with brown 4
Tegmina translucent, veins strongly tinged with brown and having black dots following radial vein distad (from Panama to Mexico).
M. maximiliani (Saussure)
- 4 Male subgenital plate as shown in figure 9 (Panama).
M. panamae, new species
Male subgenital plate as shown in figure 13 (Ecuador).
M. ecuadorana, new species

Macrophyllodromia maximiliani (Saussure, 1873)

FIGURES 1-5

Pseudophyllodromia maximiliani Saussure, 1873, p. 100, pl. 10, fig. 3.—Saussure and Zehnter, 1893, p. 46.

Macrophyllodromia maximiliani Shelford, 1908, p. 18.—Kirby, 1910, p. 565.—Hebard, 1920, p. 43; 1926, p. 152.

M. maximiliani (Saussure) is quite distinctive in its brown tegminal dots and male genital characters.

MALE: Size large and form broad for the group. Interocular space narrow, divergent toward vertex and equal to one-fourth width between antennal sockets. Ocellar spots distinct. Maxillary palpi elongate, slender; antepenultimate and penultimate segments subequal in length, ultimate segment slightly longer. Pronotum transverse, with convex lateral margins; greatest width slightly caudad of median line. Tegmina and wings well developed, extending beyond the cercal apices. Veins of tegmina very numerous. Radius vein with 10 to 12 branched rami. Media and cubitus each with a basal fork. Media with about 12 apical rami. The posterior branch of cubitus has 2 apical rami. Seven anal veins. Wings with 6 ramified rami of radius (5 anterior and 1 apical). Media simple. Cubitus vein with 5 formed branches that go to the margin. Intercalated triangle small. Supra-anal plate triangularly produced between cerci with rounded apex. Subgenital plate asymmetrical as shown in figure 4. Cephalic femora with ventrocephalic margin armed with a series of spines which decrease gradually in length mesodistad and terminate with 3 increasingly longer distal spines. Pulvilli and arolia moderately developed. Tarsal claws heavy, unspecialized.

FEMALE: Agrees with male except in the following features:

Size somewhat larger and broader. Interocular space slightly wider and divergent toward vertex, with slightly more than a third the distance between antennal sockets. Tegmina and wings somewhat reduced not exceeding cercal apices. Supra-anal plate triangularly produced between cerci and strongly bilobate at apex. Subgenital plate simple, free margin strongly convex and rounded, forming at apex a brief longitudinal carina.

Head ochraceous buff, with a dark brown band extending from the interocular area to labral suture. Antennae and maxillary palpi ochraceous buff, with light brown suffusion mostly on ultimate segment. Pronotum with two broad mesolateral longitudinal bands of brown, slightly divergent toward anterior margin, broader mesad and caudad but remain separate at caudal margin. Area between these bands and lateral margins ochraceous buff. Tegmina translucent with veins tinged with brown mostly on basal half of radius, media, and cubitus veins and on anal veins. Following radius vein distad are some black dots (about four) of different sizes and shapes. Dorsal surface of abdomen and legs cinnamon brown.

MEASUREMENTS: Total length, ♂ 22–23 mm., ♀ 17–18. Length of pronotum, ♂ 4, ♀ 3.8; width, ♂ ♀ 5.8. Length of tegmina, ♂ 20, ♀ 14; width ♂ ♀ 5.

MATERIAL EXAMINED (U.S. National Museum; Univ. Michigan): Honduras: Tela, Guaimas Dist., May 5, 1923, T. H. Hubbell, 1 ♂, 3 ♀♀. Guatemala: Lake Eckibix (Exkixil?), Dept. Petén, Feb. 26, 1935, Hubbs-Vender Schalg, 1 ♂. Costa Rica: Intercepted at San Francisco, Calif., Feb. 3, 1930, 1 ♂. Panama: Barro Colorado Island, C.Z., May 24, 1940, through James Zetek, 1 ♂; intercepted at San Francisco, Calif., Aug. 13, 1936, 1 ♀; intercepted at San Francisco, Calif., in bananas, Mar. 7, 1938, 1 ♂.

Macrophyllodromia panamae, new species

FIGURES 6-9

M. panamae, new species, is closely related to *splendida* Hebard but differs in the brown pronotal bands, coloration of legs, and distinctive male genitalic features.

Holotype, male, Barro Colorado Island, Canal Zone, June 1937, in fruit-fly trap, through James Zetek (USNM 65778).

Size large for the group. Interocular area narrow, divergent toward vertex, width about one-third that between antennal sockets. Maxillary palpi elongate, antepenultimate and penultimate segments subequal in length, ultimate segment slightly shorter. Pronotum transverse with strongly convex lateral margins, greatest width slightly caudad of median line. Tegmina and wings fully developed, extending beyond cercal apices. Radius of tegmen with 12 rami (9 anterior and 3 apical), some subdivided. Branches of media and cubitus oblique, 11 of former at margin. The posterior branch of cubitus is forked. Seven anal veins. Wings with about 9 branches of radius, some ramified. Media simple. Cubitus with 6 branches that go to the margin. Intercalated triangle small. Supra-anal plate triangularly produced between cerci, with bilobate apex. Subgenital plate asymmetrical as shown in figure 9. Cephalic femora with ventrocephalic margin and a series of spines which decrease in size mesodistad and terminate with three increasingly distal spines. Pulvilli and arolia well developed. Tarsal claws well developed. Tarsal claws unspecialized.

Head ochraceous buff with a dark brown band from interocular area to clypeus. Vertex ochraceous buff. Antennae and maxillary palpi ochraceous tawny suffused with dark brown. Pronotum with two broad mesolateral longitudinal bands of brown slightly divergent to anterior margin, broader caudad but not joining each other. Area between these bands and lateral margins of pronotum ochraceous buff. Tegmina translucent, veins tinged with brown. Abdomen cinnamon brown. Legs cinnamon brown, tibiae suffused dorsad

with prouts brown, apices of all but last segment of tarsi tipped with a suffusion of this same color.

The type is unique.

Macrophyllodromia ecuadorana, new species

FIGURES 10-14

This new species is particularly distinguished by its male genitalic characters. It is closely related to *splendida* Hebard and to *panamae*, new species, but may be readily separated by its male subgenital plate.

Holotype, male, Guayaquil, Ecuador, intercepted at San Diego, Calif., in bananas, Apr. 14, 1953, R. Wilkey (USNM 65779).

Size large for the group. Interocular space narrow, divergent toward vertex, width slightly more than one-third that between antennal sockets. Maxillary palpi elongate; antepenultimate and penultimate segments subequal in length, ultimate with strongly convex lateral margins; greatest width slightly caudad of median line. Tegmina and wings well developed, extending beyond the cercal apices. Veins of tegmina numerous; radius vein with 8 rami (7 anterior and 1 apical), some of them ramified; rami of media and cubitus oblique, about 14 of former at margin. The posterior branch of cubitus with 2 or 3 apical rami, anterior branch forked. Six anal veins. Wings with 7 radial rami, the apical ones ramified, media simple. Cubitus with 5 branches that go to the margin. Intercalated triangle small. Supra-anal plate triangularly produced between cerci, apex bilobate. Subgenital plate asymmetrical as shown in figure 13. Cephalic femora with ventrocephalic margin armed with a series of spines which decrease in size mesodistad and terminated by three progressively longer distal spines. Pulvilli and arolia well developed. Tarsal claws unspecialized.

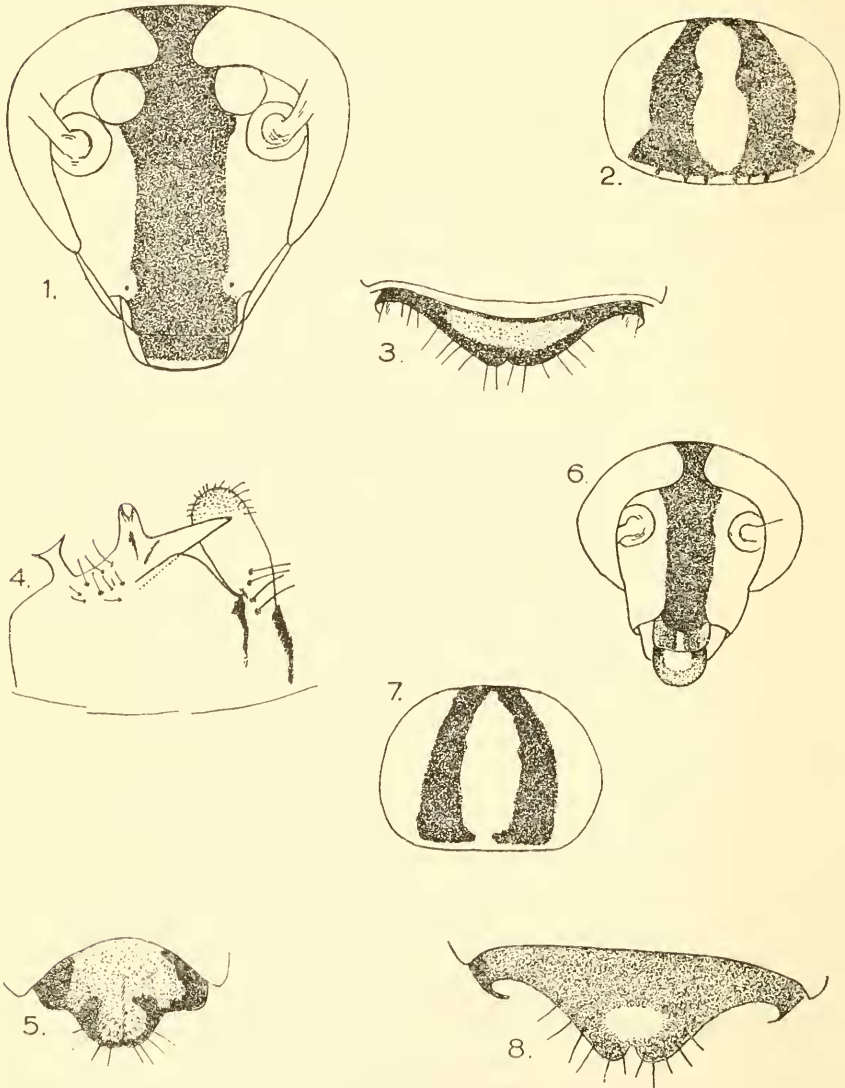
Allotype, female, Ecuador, intercepted in California, Apr. 16, 1953, in bananas, R. Wilkey.

Agrees closely with male except as follows:

Size larger and form broader. Interocular space wider, slightly more than half width between antennal sockets. Tegmina and wings somewhat reduced, not exceeding cercal apices. Supra-anal plate moderately produced between cerci, lateral margins converging to the bilobate apex. Subgenital plate large, free margin broadly convex with a brief carina at apex.

Head ochraceous buff with dark brown band from vertex to clypeus, where it suddenly expands laterad. Maxillary palpi and antennae ochraceous buff, suffused with brown. Pronotum with two broad longitudinal bands of dark brown, which broaden slightly mesad and strongly caudad but remain separate; area between bands and

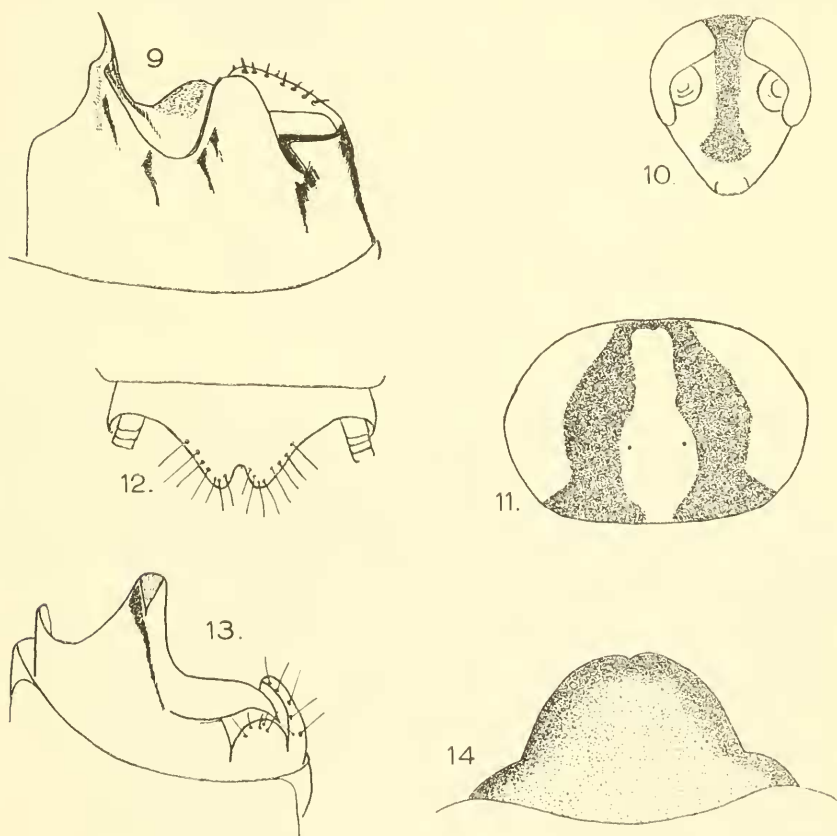
lateral margins ochraceous buff. Tegmina translucent with veins tinged with brown. Abdomen and legs cinnamon brown. Femora and tibiae suffused dorsad with prouts brown, apices of all but last segment of tarsi tipped with a suffusion of the same color.



FIGURES 1-8.—1-5, *Macrophyllodromia maximilliani* (Saussure): 1, Head; 2, Pronotum; 3, Supra-anal plate, male; 4, Subgenital plate, male; 5, Supra-anal plate, female. 6-8, *M. panamae*, new species: 6, Head; 7, Pronotum; 8, Supra-anal plate, male.

MEASUREMENTS: Total length, ♂ 23 mm., ♀ 19. Length of pronotum; ♂ 3.8; ♀ 4; width, ♂ 5.8, ♀ 6.1. Length of tegmina, ♂ 19, ♀ 14; width, ♂ ♀ 5.

MATERIAL EXAMINED (U.S. National Museum): There are 7 paratypes, all intercepted in bananas at United States ports by plant quarantine inspectors, as follows: At New Orleans, La., Feb., 11, 1953, from Honduras?, 1 ♂; from Ecuador; at San Diego, Calif., Jan. 19, 1953, 1 ♀ (also 1 nymph, not considered a paratype); in California, Feb. 24, 1953, 1 ♂; at New Orleans, La., Feb. 16, 1955, 1 ♂; Sept. 12, 1947, 1 ♀; at San Pedro, Calif., March 20, 1950, 1 ♀; at Brownsville, Tex., Nov. 22, 1951, 1 ♀.



FIGURES 9-14.—9, *Macrophyllodromia panamae*, new species, subgenital plate, male. 10-14, *M. ecuadorana*, new species: 10, Head; 11, Pronotum; 12, Supro-anal plate, male, 13, Subgenital plate, male; 14, Subgenital plate, female.

Macrophyllodromia nigrigena Hebard

Macrophyllodromia nigrigena Hebard, 1926, p. 152, pl. 12, figs. 18-19.

MATERIAL EXAMINED: Tumupasa, Bolivia, December, W. M. Mann, Mulford Biol. Exped. 1921-1922, 1 ♀.

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